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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/705,694 | 11/10/2003 | Leroy A. Johnson | D4984-00017 | 5237 |

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EXAMINER

LESLIE, MICHAEL S

ART UNIT PAPER NUMBER

3745

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,694

Applicant(s)

JOHNSON, LEROY A.

Examiner

Michael Leslie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-27 is/are allowed.
- 6) ☒ Claim(s) 1,5,12,13 and 28 is/are rejected.
- 7) ☒ Claim(s) 2-4,6-11 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/15/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claims 3, 7, and 16 are objected to because of the following informalities: Claim 3, Line 2, "substantially a spherical" should be --substantially spherical--; Claim 7, Line 3, "a central" should be --said central--; Claim 16, Line 2, "substantially a spherical" should be --substantially spherical--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 12, 13, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (4593603).

Johnson discloses an asymmetrically accelerated vibrator having a case (10) with a first bore (16) and a second bore (20) arranged coaxially in regulated communication with a source of compressed fluid (~112), a first piston (114) with a first diameter in the first bore, a second piston (not numbered) with a second diameter in the second bore, a mechanical connection (52) between the first and second pistons, and a valve (102) in fluid regulatory relation between the first and second bores and source of compressed fluid to switch a flow of the compressed fluid between the first and second bores upon interaction with a portion of the second piston. Wherein an open-ended passageway (123) is defined in a lower portion of the case, and is disposed in substantially parallel, spaced relation to the first and second bores, and an exhaust-bore (130) is

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defined in the case adjacent to an end of the open-ended passageway, and the second piston includes a valve (136) positioned within the second bore, and including a substantially cylindrical, open-ended profile defined by an annular outer wall, a bottom wall, and a chamfered end. (Fig. 5). Johnson teaches that the valve is a poppet-type valve instead of a ball valve. Duncan teaches a shut off valve for regulating flow having either a poppet-type element (Fig. 3) or ball element (Fig. 1) for controlling flow through the valve based on actuation by a piston. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Johnson by replacing the poppet-type element with a ball element as taught by Duncan for the purpose of controlling flow to the second bore.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Duncan as applied to claim 1 above, and further in view of design choice.

Duncan as modified above with respect to claim 1, teaches a ball valve, but does not teach a material for fabricating the ball valve.

Since applicant has not disclosed that having the ball valve formed from light weight, wear and corrosion resistant material solves any stated problem or is for any particular purpose above the fact that such material would improve efficiency of the valve and it appears that the valve would perform equally well with light weight, wear and corrosion resistant material as claimed by applicant, it would have been an obvious matter of design choice to modify the valve of Johnson as modified by utilizing light weight, wear and corrosion resistant material as claimed for the purpose of increasing efficiency.

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Allowable Subject Matter

Claims 15-27 are allowed.

Claims 2-4, 6-11, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Leslie whose telephone number is (571) 272-4819. The examiner can normally be reached on M-F 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
March 3, 2005


Michael Leslie
Patent Examiner
AU 3745


EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700
3/4/05